Controls for Sarvodaya

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(FOUNDED BY MAHATMA GANDHI)

Editor: K. G. MASHRUWALA

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TO THE FIGHTING FORCES OF INDIA

[Extracts from Sardar Vallabhbhai Patel's speech before the Royal Indian Air Force at Palam (New Delhi) on 1st October, 1948.]

IMPORTANCE OF THE NATIONAL LANGUAGE

The first thing that I inquired was whether I could talk to you in our own language because we have won our freedom after a hard struggle, after many years of slavery and bondage and if we did not begin to talk in our own language now, there is danger of our harbouring the remnants of slavery which may grow again into a tree, and, therefore, at least the armed forces in India must learn to talk in our national language. But I am told that there are many South Indians here who will not be able to understand our national language. I find the same difficulty in the Congress also and in our Assemblies occasionally we have to talk, or largely we have to talk, in the foreign language because of the South Indian block, still even in the Congress, lagging behind in spite of their great efforts to learn the Hindustani language. You must make up quickly, because if you go to South India also, you will not be able to talk to the common man except in the provincial language or in the national language. We have to make rapid progress in that direction. For the present, I will abide by your desire and say a few words in the language which you say you can understand.

NON-VIOLENT SOLDIER

Now, as has been suggested by your officer, I have been a soldier all my life. I am not a statesman, nor am I a politician. I have joined the armed forces of India which after a hard struggle, a prolonged struggle, got the country emancipated from bondage, and although the Commander-in-Chief of our armed forces departed from this transitory world last year and you all and we all paid our homage to Mahatma Gandhi when he left us all as orphans, it was he who really started the real struggle for freedom. Freedom's struggle which we fought was a different kind of struggle and in that struggle there were rules of honour, rules of conduct and rules which governed the struggle in which we were all engaged and of which there is no parallel in the history of the world's struggles for freedom.

A RETROSPECT

Mahatma Gandhi returned to India in 1914. For one year he kept himself secluded in his own temporary abode in Ahmedabad to see what was happening in the country, following the advice of his own leader or as he called him, *guru*, Gopal Krishna Gokhale, who brought him here from South Africa and advised him to stay in India, one year, without doing any public work or involving himself in any sort of public life. Unfortunately his *guru* died during that year, but as soon as the first year was over he started his experiment in different fields. The first in Champaran in Bihar, where the Indigo planters who had established themselves for several years were exploiting the poor peasants of Bihar, whose history of sufferings and sorrows are written in the history of that struggle. I cannot take you into the details of that struggle at this stage or at this hour, but I can only say that that was the foundation of the struggle for freedom. In a short period without any weapon in his hand except the weapon of soul force he made the planters surrender; he made the Bihar Government and the Government of India surrender, and since many years you see no planter in Bihar at all; they have all disappeared. There was no slavery so bad as the slavery of the labourers in those plantations that were in Bihar. Now after that he started a struggle in Kheda and simultaneously with Kheda he started the great labour organization in Ahmedabad. Even when no Trade Union movement was born in India, it was he who laid the foundation of the labour movement in India and that organization today is the best and the most well organized in this country; and yet the movement was of such a nature and the organization was built on such foundation that there has been the least friction between the capital and the labour in that city. And therefore the industry there has thriven to such an extent that it is the most well organized industry in India and the labourers there are the best paid labour in the country, because Gandhiji avoided friction and laid the foundation of settlement by arbitration for any dispute that arose between labour and capital. It is not so in Europe. The Trade Union movement in Europe or in the West is based on the principle of collective bargaining in which there is an element of coercion and force which results in bitterness. When Gandhiji first started this movement he had to fast for several days in support of the labourers who could not stand the organized opposition of the industry. And at the end of his fast there was a settlement

which made the industry and labour accept the principle of resolving all differences and disputes by independent arbitration. His one principle in all his movements was that we must not always claim to be in the right although we knew that we were in the right. We must not insist on our point of view being the final thing. The opponent would also claim the same thing about his view and, therefore, the best solution between the two warring elements was to refer the matter to an independent arbitration. If that principle is accepted today in the world, there will be no trouble. But you know what is happening in the United Nations Organization. People who assemble there — the big powers — who have laid the foundation of the world's unity of all countries are themselves not able to resolve their own differences and meddle with the other peoples' differences.

World Peace

That organization, if it does not improve itself, is going to land the world into terrific slaughter and destruction. In that contest if the Security Organization has been based on the principles on which Gandhiji led his struggle, the world would be happier and there would be no struggle at all. There would be peace. But all of us in the world pay lip sympathy and homage to that great leader whom this country in its degraded state, in the state of slavery of several hundred years produced. Now it is a free country. If a slave country produced such leaders, why should not India produce such greater leaders who would raise its head amongst the nations of the world?

That is our ambition. We don't want to have armed forces for aggression on any country in the world. That is not India's history. Its civilization is entirely different. India has never made any encroachment on any country by the sword throughout its history. It has done so by its culture, by its civilization, by its force of the soul. That is how it has spread its message in the past, right up to Japan, Afghanistan and other places. When the world hardly knew what civilization was, our civilizatian, without any force, without any fighting force, spread the message of peace, love and goodwill.

That was the message which Gandhiji gave to us, and wanted us to fight with that force, that weapon. We started the struggle. After a hard struggle for a prolonged period in which I had the honour to share his sorrows, his miseries, his joys, in every struggle, and had passed prolonged periods of seclusion in jail with him, it was that struggle which brought about liberty, and the fruits of which we have now to enjoy. Whether we are fit for it or not only future history can tell.

Internal Peace

. . . The internal troubles are all solved now. So far as India is concerned, in the Indian Union, nobody will raise his head now again. . . . There will be no more trouble, no more disturbance, no more violence. Both the Hindus and Muslims have adjusted themselves in such a manner that they have spoken with one voice that whatever may be the past, in India we shall not allow any trouble any more.

The Case of Hyderabad

When people talk of aggression in Hyderabad, they either deliberately misrepresent the thing from whatever motives they may have, or they do not understand what aggression is. How can we make aggression on our own people? What is Hyderabad? Is it the Nizam who is Hyderabad, or the people of Hyderabad are Hyderabad? If the people of Hyderabad are Hyderabad, it is a part of India. The British people still think that Hyderabad is a British preserve. They have not forgotten that they were rulers here. It is one year, yet they do not understand that they have now no claim here. And I trust that this will be the last debate in Parliament in which reference is made about India's business. Otherwise, we do not want to be forced into friendship. If friendship is not wanted, we have self-respect enough to stand aloof against the whole world. Because if violence is the order of the world, and we have not got sufficient organized violence, we have enou[gh] non-violence by which we know how to die. But we know how to preserve self-respect. Therefore, I wish we have no more sermons from people who still believe that they are trustees here, and trustees of the world! . . . .

Exhortation to Forces

Therefore, we, members of the air force, members of the army, members of the navy, we have learnt these lessons of modern warfare from the West. Let us not degrade it in any manner. I am glad and I am proud of you that although the Air Force has been born recently and is a baby, yet it is a very healthy and very beautiful, good-looking baby, of which India can be proud. Allow nothing to be done to disfigure it. Observe, concentrate on the rules of discipline, chivalry, and do not forget that in the armed forces there can be no community, — only one community. Whether it is Hindu, a Muslim, or a Sikh, we are all brothers. It should be so in India, but at least in the armed forces, it should be the first. You have to lay an example. We politicians have inherited a very bad legacy. We have, you had also, but we had particularly, communal representation. Everything, everything that we did, every step that we took, was weighed in communal scales. You had also the Maratha Regiment, the Jat Regiment, the Sikh Regiment. I do not know about the Air Force, whether you have any such thing. But we wish to forget all that. We must now rewrite our history because we are beginning, and we have a clean slate.

New India

You have seen that in one year India's map has been considerably changed. The proud princes also have realized the change in the atmosphere, and in one year, they have accommodated themselves in such a manner that without firing a shot, without any trouble, except in two States, we rearranged the whole map of India, and we have introduced

integration and democratization in all the States. It is an achievement of which we can all be proud, and, therefore, I always congratulate our princes for showing wisdom and a sense of patriotism. Let us forget the past. Let us see what they are doing now. They were themselves not free, they are free today. So you see the Maharaja of Bhavanagar being the Governor of Madras. It is a great change; it is a revolution; it is a great thing. He is a common man, he is not H. H., His Highness. He has abandoned "His Highness", he has become a common man, a protector and a trustee of the people of Madras. Thus, princes and people must learn to be equals and share fates, sorrows, miseries, and the pride and the wellbeing of our nation. In that we are all put together in a common boat and we begin our journey in the ocean of the world.

Therefore, I am glad I had an opportunity to meet you today. I am still under my doctor's injunctions and he has asked me particularly not to strain much, especially in talking. So I do not wish to disobey his injunctions because I still want to preserve the little energy that is left in me at this age to see that India takes its proper place, not merely by winning her freedom but by raising the status and strength of India in such a manner that the people who are preaching sermons to us begin to respect us and begin to say that they have also something to learn from us and not always to teach us. That is my ambition. In that we must all put our heads together and go ahead.

. . . To those who say that we do not follow the preachings or teachings of the Mahatma, we say, "Perhaps you from a distance know better about the Mahatma's teachings than we, who have, all along, all our life, been with him, know! Thank you very much. We will not take our lessons from you, but we will go our own way. We have our own lights. We must work according to our own lights. We have seen what is happening in Europe, what degradation, what destruction the world has faced from Western civilization. We want to be spared of it. Let us go our own way." That is what we want to tell them. And for that purpose, we must not forget our foundation, our civilization, although we may copy the best from the West. And, therefore, when we take lessons in the Army, in the Navy, or in the Air Force, in modern warfare, we must not degrade ourselves. May God give us enough sense not to do anything which would bring dishonour to our country. I wish to say no more on this occasion. The Departed Soul takes account of our doings. He watches us from heavens. Whether we deserve or not the leadership which he gave us for a prolonged period and freed the country, he takes account. Let us not forget it. Let us do nothing which would make him unhappy. We have, when we cremated the last remnants of his frail body last year, all of us paid our homage, but that is all worldly. The real homage that we can pay to his memory is to try to follow his footsteps as far as we can. We know his life is an open book. We know his teachings. We must try to follow that. Never forget that unity is your strength. If one of you or your colleague gets a better job, do not feel jealous of him but be proud of him. If one below you is promoted, try to obtain merit enough to get your proper place, but do not be disgruntled. Do not feel unhappy because your colleague has been better off than you. Feel happy because he is after all your comrade. Therefore, you learn more of discipline, comradeship and unity in your Force and in your schools you must have learnt more. But in thirty years or thirty five years of struggle we have also learnt more of the rules of struggle, of chivalry, of discipline, of comradeship, of unity which are more or less common in both non-violent struggle as well as in the violent struggle. The rules of struggle or fight are all common because they are all based on a moral standard. Therefore do not do anything which would bring discredit to you.

I wish you success and god-speed in your career.

BAPUJI AND TESTIMONIALS

I was deeply interested to read Shri Devadas Gandhi's article *Our Nationals Abroad* in the *Hindustan Times* dated the 10th October, 1948, and specially the following remark of Bernard Shaw:

> "I am also pestered by Indians who ask me for testimonials to India. I reply that India is not a patent medicine on sale, and that until Indians give up cadging for foreign testimonials, they will be ranked in the West as childish beggars. If they must have Messiahs, let them look for them at home. If they must have temples and idols, let them be to Gandhi and Tagore and not to British Tom, Dick, and Harry."

In this connection I remember, how once I had expressed my desire to have a testimonial from Bapuji at Sevagram, where Bapuji gave me and my wife day to day instructions, to train us up in the various activities of the Ashram, so that we could be of some service to our motherland. Bapuji, who was observing silence, wrote the following loving letter, which might be of general interest in this connection:

"Sevagram, 27-3-'45

"Dear Gurbaxani,

"Along with is Amrit Kaur's letter. Why do you want a certificate? To the truthful, truth itself is a certificate. To ask for a certificate is a bad habit. I kept it myself for a short time, but it is for 55 years now that I have left it. Not only don't take mine, don't take anybody else's. Don't ask for it. Have faith in your truth and non-violence. Do write to me, write in Hindustani. Both of you do write to me, Vimla if she can do so. The rest you will come to know from Rajkumari's letter.

"*Bapu ke Ashirvad*"

And that is how with Bapuji's own handwritten letter of introduction to Rajkumari, we left for Simla on the day Bapuji left for Bombay.

Bikaner, 14-10-'48 Gope Gurbaxani

HARIJAN

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CONTROLS FOR SARVODAYA

If Government pursues the policy of controls, it is blamed by one section of the population: if it lifts them, it is severely criticized by another; if the controls are partially lifted or partially imposed, it is discredited by both. The common ground between the advocates of control and those of decontrol is that both admit that we have to deal with a people and a set of traders and officers whose sense of civic duty and honesty is deficient and who regard their immediate self-interest as more entitled to consideration than anything else. The advocates of control seek to restrain the selfish instinct of one set through ever tightening controls; those of decontrol seek to defeat that of another set by allowing full scope for competition.

A correspondent who has chosen the pseudonym *Disgusted*, sends me a copy of an article which he wanted to send to Gandhiji but could not do so as he received the news of his assassination that very day. He assures Gandhiji that he is

> "neither a capitalist nor a businessman and has no personal axe to grind, nor any pecuniary benefits to be gained from decontrol, but is only one who holds a responsible executive position and has seen the working of controls at close quarters, is fed up with the increasing routine work, red-tapism and the inordinate delay in pushing through even essential commodities apart from the inefficiency and wholesale demoralization of officialism and the public."

He writes to me:

> "Since then (Gandhiji's death) a long time has passed but the comments made in the article still hold good. It was predicted then that the partial lifting of controls, on account of the go-slow policy advocated by vested interests, will lead to its own failure. This the partial decontrol of food grains and cloth has amply proved. Controls are again being instituted. . . .
>
> "High ranking Ministers like Panditji and Sardar Vallabhbhai Patel are requesting the public to co-operate and make the controls successful. They are asking for something which is impossible under the regime of controls. Controls have meant high prices, deteriorated food grains and on the top of it insufficient quotas on the alleged ground of shortages. If there are real shortages, how can materials be found in any quantity in black markets? Lifting of controls may lead to higher prices for a short time, but the remedy will be in asking the public not to purchase articles like cloth and other things. Food grains may be distributed by Government through their grain shops in big industrial cities and through industrial and commercial bodies at cost price and not at any inflated price and in sufficient quantities. I think that if this is done, instead of continuing controls and provincial restrictions on movements, the people will heave a sigh of relief. Government need watch only the border provinces against smuggling activities."

I have read his article, as also another written by him subsequently. I regret on account of their length, I am unable to find space for them. He feels that

> "ministers both at the centre and in the provinces are completely out of touch with public opinion and they are so much obsessed with their ideas of social justice and obliteration of vested interests that they are unable to see the new vested interests they are creating. Controls which were necessary during the war period are sought to be perpetuated on grounds of shortage and equitable distribution. Traders and businessmen are accused of blackmarketing, hoarding, profiteering and greed. If they had only taken the trouble to find out the sources of blackmarketing, they would have found their own staff and the poorer classes of society in whose interests controls are said to be maintained to be the real sources. There may be a few unscrupulous among the old trading community, but the vast majority are creations of the control authorities. Even now one hears of high level official talks when the problems are absolutely simple and need no consultation, especially with the very classes who are interested in keeping these controls. One cannot understand even the go-slow policy for lifting controls."

After criticizing Central and Provincial Governments for their several shortcomings and wrong approaches, he says:

> "The crux of the whole problem lies in quick movement of materials. When the railways could handle a heavy traffic increase during war years, it is not understood why they cannot do the same even now. I think if sufficient pressure is brought upon the railway staff and instances of corruption and inefficiency are strictly dealt with, we can move more goods than what we are doing at present. Railway priorities should be completely abolished and food grains, pulses, sugar, *gur*, cloth etc., should be given the first priority. Once this is done, corruption in the railway staff will vanish.
>
> "Luxury imports may either be totally prohibited or prohibitive import duties be levied, instead of allowing discretion to be vested in the hands of executive officers."

After suggesting a number of, what he regards to be, correct remedies to meet the situation, in lieu of the policy of controls, he concludes:

> "The mercantile community and the public are fed up with the control hypocrisy. 'Controls have outlived their purpose' is the writing on the wall today and nobody will bother to question its utility as a wartime measure. Continuance of these measures, however modified, will only render the already complicated supply position more complex and nothing short of complete abolition is going to bring in that era of free availability and cheap

rates. It is too much to be expected of the unfortunate inhabitants of this country that even after the close of the war, they should suffer with patience all the difficulties and miseries in the matter of their daily basic necessities and that they should keep on paying for the cost of such a rotten organization as the Control Administration with its infectious inefficiency and plaguing corruption. The patience of the people has reached its breaking point and they are crying aloud, 'For heaven's sake, save us from our friends'."

The correspondent is by no means a solitary writer. I have received correspondence in English, Hindi, Urdu, Gujarati and Marathi complaining against the reimposition of controls. Each one has a remedy to suggest. I may not exclude myself. Indeed, if Pandit Jawaharlal were to act over again the story of Akbar and Birbal, he could send a clerk to the Chandni Chowk at Delhi to enquire of every pedestrian if he knew a remedy against the present market-disease, the clerk would come back with a long list of "sure remedies" suggested by every one of them. There is no dearth of doctors or remedies in the world. Indeed, the number of "sure remedies" and systems of treatment is much greater than that of diseases.

Decontrol has, no doubt, been urged very strongly by several writers. But I find that few of its advocates do it cent per cent. Control over imports and exports, regulation of transport, a system of heavy punishments and the like are expected by every one of them. There are hardly any who believe that men could be put on their honour for doing the right thing or suffer the consequences of going wrong. Rather, all seem to assume that men left to themselves will not behave as good citizens should.

Under these circumstances, with all my dislike for controls and penal legislations and my faith in Gandhiji's advocacy for the lifting of controls, I feel that the problem is by no means "absolutely simple" as suggested by the correspondent above referred to. Rather, it is very complicated, and it is absolutely necessary that none should feel dogmatic and certain of the correctness of his own views; that none can afford to feel "disgusted" with policies not in accordance with one's views. Let every critic realize that as between Government and himself, he has as compared with the Government's, smaller field of observation, fewer means of getting information, less knowledge of the various theories and remedies put forth, and less realization of the difficulties which Government has to face in implementing even such measures as are commonly accepted by all, e. g. the difficulties in the way of arranging quick transport, and putting down corruption in the railway and licensing and other Government departments. Let every one of us realize that fortunately we have as the head of the Central Government, and in his cabinet, as also in the various provincial Governments, men, who, though they may not be omniscient or incapable of making mistakes, are in intelligence, high character and love for their people and earnestness of purpose, the cream of the nation. They have a right to expect and we have a duty to render every assistance to them by honestly co-operating with their policies and measures even if we feel that they are making mistakes. Even if they fail, let us not gloat over their failures and say, 'We had said so;' let us also not encourage the people to defeat the Government policy by saying 'it will never work.' Let every citizen think that it is the people's own Government that governs him, and he is as much responsible for the continuance of the detested controls as the corrupt trader or the corrupt Government servant; that the proper way of getting the controls removed is by honestly abiding by them; by trying to get no advantage through influence, tip or bribe, but by awaiting one's turn, feeling satisfied with one's share, and foregoing one's share if one does not need it.

I accept: (i) that the existence of the black-market shows that the scarcity of goods, even food grains, is less than imagined; (ii) that in reality there is greater scarcity of honesty, of regard for the neighbour and of sense of civic duty than goods; and that (iii) what we are trying is to find substitutes for these moral shortages through controls and penal regulations. But the removal of the last is possible only by implementing the second; and this in turn implies the implementation of (i), that is bringing to the markets all buried goods and selling them at non-profiteering prices, and the habit of self-control. Control, in a sense, is the inviolable law of *Sarvodaya* (the wellbeing of all). When it is not self-imposed, popular Governments try to impose it from above. They cannot help it. To remove Government control, let us resolve to exercise self-control.

Bombay, 11-11-'48 K. G. MASHRUWALA

Business v. Food

While shortage of food promises famine, available food is being destroyed by industries, and government influence, power and resources are being directed towards this. Elsewhere we have shown how the wholesome *gur* industry is being ousted by the Sugar Mills which destroy nutritive values out of cane juice. For this disservice the public has been made to contribute in the form of protective duties amounting to over 72 crores; similarly the tea-planters' interests are being advanced by an expenditure of over half a crore every year in the form of Tea Cess.

The *Vanaspati* Oil Mills add nothing to the existing food supply. It only processes the available oil, and that too uselessly from the nutritive point of view and raises the price by about 80%. So it is purely a business proposition of obtaining money from those who pay for a fanciful article. This business locks up over 50 crores of the available funds and diverts over 50 lakhs of acres of cultivable land to growing raw materials for the mills.

The question before the Government is which is to have priority — business or food?

J. C. K.

THE SCIENTIFIC AND ECONOMIC ASPECTS OF PROHIBITION

Among the many ameliorative measures promulgated by the Congress Ministries when they took charge of the destinies of the Nation in the various Provinces, Prohibition remains one of the most courageous, far-sighted and praiseworthy legislations. The measure is one which was dearest to Gandhiji and is calculated to remove one of the most potent causes of the poverty and unhappiness of the less fortunate classes of the population in the industrial and rural areas.

The introduction of Prohibition, while it raises the moral stature and promotes the material well-being of the common man, has led to a substantial, if not a serious, reduction in the revenues of the State, running into many tens of crores of rupees. During the last Congress Ministry Shri C. Rajagopalachariar (now His Excellency the Governor-General of India), then Prime Minister, Madras, sought to meet the difficult financial deficit by the introduction of the Sales Tax, which proved successful in meeting the deficit to a considerable extent.

Since the 15th August, 1947, enlightened opinion in the country has been growing that the effects of drink on the impoverished masses is too serious to admit of any further delay in forging ahead with the remedial measures which include Prohibition. Prohibition as a programme of National rehabilitation and reconstruction has, therefore, been accepted as a measure demanding immediate attention. It has the enthusiastic backing of all our elder statesmen.

Prohibition has, however, raised issues which, we are afraid, have not been fully appreciated and satisfactorily tackled. In the present context of social, educational and industrial regeneration of the country for which ambitious plans have been formulated, the serious financial deficit which confronts Provincial Governments will be admitted as exceedingly unfortunate and embarrassing. In view of the present low-earning capacity of the average Indian citizen, there are very definite limits as to what can be got out of him by way of fresh taxation.

The tapping, the transport and the distribution of the toddy liquor together constitute a prosperous enterprise which provides employment to a large number of tappers — a class of hereditary professionals who are skilled in the technique of obtaining the juice from the palms — not to speak of the personnel employed in the transport and distribution of toddy, which is carried on by a chain of middlemen, petty contractors and shop-keepers. The interests of this well-developed and closely knit organization is now at stake. The men connected with this trade amount to several hundreds of thousands and are now threatened with the prospect of losing perhaps their only means of livelihood by the introduction of this measure.

It seems to us that the stage has been more or less set for men of science and technology to accomplish two things: first, to keep the traditional organization functioning and prevent a crash in its structure, and (2) to discover a process by which palm juice could be converted into a valuable revenue-yielding product.

The deleterious effects of toddy (fermented juice of palm) and the arrack (the distilled liquor), which are the forms most commonly indulged in by the poorer classes of addicts, are due to their alcoholic content. The unfermented juice of the palm generally known as sweet toddy, has been recognized from times immemorial to constitute an invigorating tonic beverage prescribed by practitioners of indigenous medicine for anaemic and syphilitic patients during convalescence. Palm juice is used for making a crude form of *gur* (crude sugar) by boiling down the juice in open pans; the dark residue, cast into cubes, is commercially available in restricted amounts and is employed by *ayurvedic* and *unani* physicians as a sweetening vehicle for many of their tonics. It enjoys the reputation of being therapeutically far superior to the *gur* made from cane juice. Considerable quantities of palm *gur* was being used as raw material in refineries for the manufacture of sugar and with the advent of Prohibition larger quantities of this product are likely to be made available since many of the Provincial Governments have already inaugurated a scheme for the manufacture of *gur* from palm juice as one of the practical solutions to the problem of its economic utilization. There is little information regarding the costs of manufacture and whether the returns compare favourably with those of the cane *gur*.

The ideal to be aspired in the solution of this problem is to convert palm juice into a beneficent product as valuable as fermented toddy or distilled arrack has been from the point of view of the yield of revenue to the State but without the evil effects of the intoxicant on the social life of the people. If the juice could be utilized for manufacturing a product like a vitamin-rich and nourishing concentrate like malt extract or an antibiotic like penicillin, it would constitute a valuable achievement. Since the juice is known to contain on an average, 10 to 12 per cent of cane sugar, the product should provide an ideal raw material for many of the fermentation industries, including those pertaining to the production of citric and lactic acids. Whatever be the product proposed to be manufactured, we are initially confronted with two major limitations: the first difficulty arises out of the inherent quality of the juice, viz. the extreme rapidity with which it gets infected and ferments; the second one is connected with the circumstance that the palm trees do not occur as continuous and uniformly distributed plantations but appear as fortuitously scattered groups in widely separated and sometimes difficultly accessible areas. This situation renders the tapping, collection and transport of the juice difficult, time consuming and expensive.

The problem of collecting the material from widely scattered areas and preserving it from

spoilage until it reaches a central factory where it is to be further processed, demands the immediate attention of those interested in a rational solution of the problem. The Government of Bombay have recently instituted the award of a prize of Rs. 10,000 for the discovery of a preservative which would effectively keep the juice in its natural state without any "spoilage" and without lowering or abolishing any of its "goodness".

We understand that this problem is being vigorously tackled both at the Indian Agricultural Research Institute, New Delhi, and at the Indian Institute of Science, Bangalore. Investigations at Bangalore have revealed that freshly drawn and carefully preserved juice contains adequate amounts of the more important components of the B-complex and is nutritively and therapeutically comparable to malt extract. These preliminary findings lend convincing support to the time-honoured belief in the efficacy of palm juice as a health-giving tonic. It is to be expected that the researches now under way may lead to an entirely new approach to the problem of the economic utilization of the juice.

There is one aspect of this problem which merits elucidation in some detail. Palm juice as a raw material for the manufacture of cane sugar offers many exceptional advantages. First, the expensive crushing machinery which is an essential part of every cane sugar manufacturing enterprise, can be eliminated in the case of a factory devoted to the manufacture of sugar from palms. Palm juice is the result of just "tapping" which of course is a highly skilled operation. Secondly, since the juice is comparatively free from chlorophyllous and other pigments, the process of clarification is considerably simplified. Thirdly, the juice is considered to be free from sucrose inverting enzymes, which minimize the formation of molasses. Fourthly, the annual cost of cultivation attending the raising of sugar-cane crops is entirely eliminated. Today, palms constitute a free and generous gift of Nature; they flourish without any attention in some of the most inhospitable and barren soils and continue to yield the saccharine juice for 60-70 years. With a little attention and care the useful life of the palm could perhaps be extended and the yield of juice augmented. These are problems for the future when the palm will come to be recognized as the sugar-yielding perennial.

It is interesting to recall that as early as 1901, a company (The Khandwa Sugar Manufacturing Co.) was organized in the Central Provinces to promote the production of palm sugar. The causes which led to the failure of the enterprise are obscure and it would be interesting and instructive to investigate them. Exact data are not available on the question of the yield of the juice per tree per season. It is roughly estimated that a single palm, if well-developed, might yield sufficient juice to make a maund of sugar which, at the current rate, would cost about Rs. 35. If a hundred palms can be optimally stocked in an acre of land, the annual gross revenue per acre would amount to a surprising figure of Rs. 3,500. These data have to be checked but they serve to emphasize the potentially remunerative aspects of the enterprise. A conservative estimate of the number of palms in the country puts the figure at 4 crores; this potential source of natural wealth should be exploited. We would strongly urge the Provincial and State Governments interested in this perennial crop, to constitute a Central Advisory Board to devise ways and means by which this important source of raw material could be economically capitalized in support of Prohibition and the services of the present trade organization mobilized on modern lines without creating unemployment in its ranks.

(*Editorial*, in the CURRENT SCIENCE, *September, 1948*)

Charkha Teachers

The suggestions made in the following letter from a retired primary school teacher are so obvious that nothing need be added to recommend them:

"Government has begun to introduce hand-spinning and hand-weaving in the primary schools of Bombay. I know several of the about 150 teachers in Broach and 500 in Surat. Of these hardly 2 to 3 per cent are *khadi*-wearers. I imagine the same must be the position in the whole province. In the superior staff (Administrative Officers, Supervisors, Inspectors, their Assistants and the like) the percentage of *khadi*-wearers is perhaps still less. Under these circumstances is it to be expected that they could create love for spinning among their pupils?

"The U. P. Government has required all Government servants to learn Hindi within a stated period. The organizer of the Sarvodaya Exhibition (to be held at Jaipur in next December) has insisted that every worker, artisan and exhibitor must be a *khadi*-wearer. I think that in order to create love for spinning and *khadi* among children, it should be obligatory for all teachers and officers of the Education Department to wear *khadi*.

"When I first joined the Broach Municipal Service in 1913, the School Committee required that every teacher must attend the school fully dressed: that is to say, he must put on a coat, a turban and a shawl or *chaddar*. This obliged even the junior-most teacher with a salary of seven rupees per month to put on a coat and a turban. If it was legitimate for Government to make that dress obligatory upon its teachers, I believe it can with greater propriety make spinning and *khadi*-wearing obligatory upon them at this stage of national regeneration.

"Along with other conditions usually accompanying appointments of teachers and higher officers, that of regular spinning and *khadi*-wearing might also be made a necessary qualification for the post."

Bombay, 8-11-'48 K. G. M.

(*Translated from the original in Gujarati*)

QUESTION BOX

Speaking in English

Q. Why do our leaders often prefer to speak or broadcast in English instead of the national language?

A. (a) Please refer to the opening paragraph of Sardar Vallabhbhai Patel's speech at Palam (New Delhi) on 1st October, 1948, before the Royal Indian Air Force, published elsewhere in this number.

(b) In addition to this it also becomes at times necessary for international purposes to speak in English so that the world outside India might know what India thinks or feels on particular questions.

(c) I do not mean that there is also not weakness on the part of some to speak in English quite unnecessarily.

Bombay, 5-11-'48 K. G. Mashruwala

EARTH HOUSES — III

There is a tendency of mixing up earth work with mud work. Earth becomes mud when mixed and worked up with sufficient water to make it plastic or semi-liquid. Mud has its own important place in housing and for certain purposes mud is the best solution; but mud, even in the shape of a stiff plastic cake cannot be rammed.

Earth required for ramming should be slightly damp, fresh and cool to the touch, but not wet enough to soil the hands. When gripped tight it should just hold together and when dropped to the ground from the waist line, it should break up easily.

The optimum moisture for rammed earth depends on the composition of the soil. The optimum mixture is one that will give the strongest wall and the most resistant to rain. When there is little sand, the interstices between the grains of gravel take plenty of water away and therefore more water is required. With more sand there is less demand for water. A heavy clay soil will absorb up to 15% of water before it is fit for ramming, while a sand content of 30% to 60% will need a moisture content of 10% to 7%.

Nevertheless it is better to err on the more water side. When earth is rammed too dry, the clay will fail to function as a binder and a weak wall will be the result. Excess of water, unless it interferes with the ramming will give just a few more superficial cracks. It is in a markedly sandy soil that all excess of moisture is clearly detrimental to strength.

All excess of water reduces the density of the rammed wall, and the strength, toughness and durability of the rammed earth wall depends primarily on its density. Time will correct the mistakes due to excess or shortage of water content while ramming. A rammed earth wall is "breathing", it takes in and gives up atmospheric moisture freely. A sort of curing action takes place, the wall matures and steadily gains in strength. Rammed earth well done improves with time and its durability is amazing. Protected from water, it will last for centuries, as proved by many instances.

A freshly made section of rammed earth wall is so strong, that the work can proceed immediately on the top of it. Yet there will always be a slight shrinkage on drying. This shrinkage depends on the sand and the moisture content of the earth used for the work. This shrinkage is less with more sand and more with more water.

A well made wall, rammed with properly prepared and correctly blended soil, rammed fully, i. e. till the volume of the loose soil is reduced to half, will give a shrinkage between 0·5% and 1·5%, depending on the sand and water content.

Damp earth dries quickly and therefore the watering of the prepared earth should be done a few hours at the most before ramming or just before ramming, if the work is done in the sun.

With experience it is easy to feel the correct dampness by touch and finger pressure and by the behaviour of the earth under the ramming tools. Yet there is a limit to the reliability of the personal factor and the man in charge of mixing should periodically get his "touch" checked up with a balance and a measuring cup.

Because of the necessity of having the moisture content under control, rammed earth work should not be done during the monsoon, unless both the earth prepared for ramming and the wall itself are fully protected from rain. The simplest form of roof will do, but some roof is essential. But it would be better to adhere to the rule that rammed earth work is for the dry season, when weather is helpful and labour available.

Maurice Frydman

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By M. K. Gandhi

Translated by Dr. Sushila Nayyar

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